

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/563,570
Source: IFWP
Date Processed by STIC: 11-9-06

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 01/19/2006

PATENT APPLICATION: US/10/563,570

TIME: 13:23:31

Input Set : A:\059742-5001-US Sequence Listing.txt

Output Set: N:\CRF4\01192006\J563570.raw

3 <110> APPLICANT: David, WAGNER H

5 <120> TITLE OF INVENTION: METHODS FOR PREDICTING DEVELOPMENT OF AUTO-IMMUNE DISEASES

AND

6 TREATMENT OF SAME

8 <130> FILE REFERENCE: 059742-5001-WO

C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/563,570

C--> 10 <141> CURRENT FILING DATE: 2006-01-06

10 <150> PRIOR APPLICATION NUMBER: US 60/484,655

11 <151> PRIOR FILING DATE: 2003-07-07

13 <150> PRIOR APPLICATION NUMBER: PCT/US2004/021646

14 <151> PRIOR FILING DATE: 2004-07-07

16 <160> NUMBER OF SEQ ID NOS: 21

18 <170> SOFTWARE: PatentIn version 3.3

20 <210> SEQ ID NO: 1

21 <211> LENGTH: 6545

22 <212> TYPE: DNA

23 <213> ORGANISM: Homo sapiens

25 <400> SEQUENCE: 1

```

26 gagagcagag aacacacttt gccttctctt tggatttgag taatatcaac caaattgcag      60
28 acatctcaac actttggcca ggcagcctgc tgagcaaggt acctcagcca gcatggcagc      120
30 ctctttccca cccaccttgg gactcagttc tgccccagat gaaattcagc acccacatat      180
32 taaattttca gaatggaaat ttaagctggt ccgggtgaga tcctttgaaa agacacctga      240
34 agaagctcaa aaggaaaaaagg aggttcctt tgaggggaaa ccctctctgg agcaatctcc      300
36 agcagtcctg gacaaggctg atggtcagaa gccagtccca actcagccat tgttaaaagc      360
38 ccaccctaag ttttcaaaaga aatttcacga caacgagaaa gcaagaggca aagcgaatcca      420
40 tcaagccaac cttcgacatc tctgccgat ctgtgggaat tcttttagag ctgatgagca      480
42 caacaggaga tatccagtcc atggtcctgt ggatggtaaa accctaggcc ttttacgaaa      540
44 gaaggaaaag agagctactt cctggccgga cctcattgcc aagggttttc ggatcgatgt      600
46 gaaggcagat gttgactcga tccaccccac tgagttctgc cataactgct ggagcatcat      660
48 gcacaggaag tttagcagtg ccccatgtga ggtttacttc ccgaggaacg tgaccatgga      720
50 gtggcaccac cacacacat cctgtgacat ctgcaacact gccgctcggg gactcaagag      780
52 gaagagtctt cagccaaaact tgcagctcag caaaaaactc aaaactgtgc ttgaccaagc      840
54 aagacaagcc cgtcagcgca agagaagagc tcaggcaagg atcagcagca aggatgtcat      900
56 gaagaagatc gccaaactgca gtaagataca tcttagtacc aagctccttg cagtggactt      960
58 cccagagcac tttgtgaaat ccatctcctg ccagatctgt gaacacattc tggctgaccc      1020
60 tgtggagacc aactgtaagc atgtcttttg ccgggtctgc attctcagat gcctcaaagt      1080
62 catgggcagc tattgtccct cttgccgata tccatgcttc cctactgacc tggagagtcc      1140
64 agtgaagtcc tttctgagcg tcttgaaatc cctgatggtg aaatgtccag caaaagagtg      1200
66 caatgaggag gtcagtttgg aaaaatataa tcaccacatc tcaagtcaca aggaatcaaa      1260
68 agagattttt gtgcacatta ataaaggggg ccggccccgc caacatcttc tgtcgctgac      1320
70 tcggagagct cagaagcacc ggctgagggg gctcaagctg caagtcaaag cctttgctga      1380
72 caaagaagaa ggtggagatg tgaagtcctg gtgcatgacc ttgttctgc tggctctgag      1440
74 ggcgaggaat gagcacaggc aagctgatga gctggaggcc atcatgcagg gaaagggctc      1500
76 tggcctgcag ccagctgttt gcttggccat ccgtgtcaac accttctca gctgcagtca      1560

```

RAW SEQUENCE LISTING

DATE: 01/19/2006

PATENT APPLICATION: US/10/563,570

TIME: 13:23:32

Input Set : A:\059742-5001-US Sequence Listing.txt

Output Set: N:\CRF4\01192006\J563570.raw

```

78 gtaccacaag atgtacagga ctgtgaaagc catcacaggg agacagattt ttcagccttt 1620
80 gcatgccctt cggaatgctg agaaggtact tctgccaggg taccaccact ttgagtggca 1680
82 gccacctctg aagaatgtgt cttccagcac tgatgttggc attattgatg ggctgtctgg 1740
84 actatcatcc tctgtggatg attaccaggt ggacaccatt gcaaagaggt tccgctatga 1800
86 ttcagctttg gtgtctgctt tgatggacat ggaagaagac atcttggaag gcatgagatc 1860
88 ccaagacctt gatgattacc tgaatggccc cttcactgtg gtggtgaagg agtcttgtga 1920
90 tggaaatggg gacgtgagtg agaagcatgg gagtgggcct gtagttccag aaaaggcagt 1980
92 ccgtttttca ttcacaatca tgaaaattac tattgccac agctctcaga atgtgaaagt 2040
94 atttgaagaa gccaaaccta actctgaact gtgttgcaag ccattgtgcc ttatgctggc 2100
96 agatgagtct gaccacgaga cgctgactgc catcctgagt cctctcattg ctgagaggga 2160
98 ggcatgaag agcagtgaat taatgcttga gctgggaggg attctccgga ctttcaagtt 2220
100 catcttcagg ggcaccggct atgatgaaaa acttgtgcgg gaagtgggaag gcctcgaggc 2280
102 ttctggctca gtctacattt gtactctttg tgatgccacc cgtctggaag cctctcaaaa 2340
104 tcttgtcttc cactctataa ccagaagcca tgctgagaac ctggaacgtt atgaggtctg 2400
106 gcgttccaac ccttaccatg agtctgtgga agaactgcgg gatcgggtga aaggggtctc 2460
108 agctaaacct ttcattgaga cagtcccttc catagatgca ctccactgtg acattggcaa 2520
110 tgcagctgag ttctacaaga tcttcagct agagataggg gaagtgtata agaatcccaa 2580
112 tgcttccaaa gaggaaaagga aaaggtggca ggccacactg gacaagcatc tccggaagaa 2640
114 gatgaacctc aaaccaatca tgaggatgaa tggcaacttt gccaggaagc tcatgaccaa 2700
116 agagactgtg gatgcagttt gtgagttaat tccttccgag gagaggcacg aggtctgag 2760
118 ggagctgatg gatctttacc tgaagatgaa accagtattg cgatcatcat gcctgctaa 2820
120 agagtgccca gaatccctct gccagtacag tttcaattca cagcgttttg ctgagctcct 2880
122 ttctacgaag ttcaagtata ggtatgaggg aaaaatcacc aattattttc acaaaacctt 2940
124 ggcccatgtt cctgaaatta ttgagaggga tggctccatt ggggcatggg caagtgaggg 3000
126 aaatgagtct ggtaacaaac tgtttaggcg cttccggaaa atgaatgccg ggcagtccaa 3060
128 atgctatgag atggaagatg tcctgaaaca ccactggttg tacacctcca aatacctcca 3120
130 gaagtttatg aatgctcata atgcattaaa aacctctggg ttaccatga accctcaggc 3180
132 aagcttaggg gaccatttag gcatagagga ctctctggaa agccaagatt caatggaatt 3240
134 ttaagtaggg caaccactta tgagttggtt tttgcaattg agtttccctc tgggttgcat 3300
136 tgagggtctt tcctagcacc ctttactgct gtgtatgggg cttcaccatc caagaggtgg 3360
138 taggttgagg taagatgcta cagatgctct caagtcaagg atagaaactg atgagctgat 3420
140 tgcttgaggc ttttagtgag ttccgaaaag caacaggaaa aatcagttat ctgaaagctc 3480
142 agtaactcag aacaggagta actgcagggg accagagatg agcaaagatc tgtgtgtgtt 3540
144 ggggagctgt catgtaaatc aaagccaagg ttgtcaaaga acagccagtg aggccagaaa 3600
146 ttggtcttgt ggttttcatt tttttcccc ttgattgatt atattttgta ttgagatatg 3660
148 ataagtgcct tctatttcat ttttgaataa ttcttcattt ttataatttt acatatcttg 3720
150 gcttgctata taagattcaa aagagctttt taaatttttc taataatatc ttacatttgt 3780
152 acagcatgat gacctttaca aagtgtcttc aatgcattta cccattcgtt atataaatat 3840
154 gttacatcag gacaactttg agaaaatcag tcctttttta tgtttaaatt atgtatctat 3900
156 tgtaaccttc agagtttagg aggtcatctg ctgtcatgga tttttcaata atgaatttag 3960
158 aatacacctg ttagctacag ttagttatta aatcttctga taatatatgt ttacttagct 4020
160 atcagaagcc aagtatgatt ctttattttt actttttcat ttcaagaaat ttagagtttc 4080
162 caaatttaga gcttctgcat acagtcttaa agccacagag gcttgtaaaa atataggtta 4140
164 gcttgatgtc taaaaatata tttcatgtct tactgaaaca ttttgccaga ctttctccaa 4200
166 atgaaacctg aatcaatttt tctaaatcta ggtttcatag agtcctctcc tctgcaatgt 4260
168 gttattcttt ctataatgat cagtttactt tcagtggatt cagaattgtg tagcaggata 4320
170 accttgattt tttccatccg ctaagtttag atggagtcca aacgcagtac agcagaagag 4380
172 ttaacattta cacagtgttt tttaccactg tggaaatgtt tcacactcat ttttccttac 4440
174 aacaattctg aggagtaggt gttgttatta tctccatttg atgggggttt aatgatttgc 4500

```

RAW SEQUENCE LISTING

DATE: 01/19/2006

PATENT APPLICATION: US/10/563,570

TIME: 13:23:32

Input Set : A:\059742-5001-US Sequence Listing.txt

Output Set: N:\CRF4\01192006\J563570.raw

```

176 tcaaagtcatt ttagggggtaa taaatacttg gcttggaat ttaacacagt ccttttgtct 4560
178 ccaaagccct tcttctttcc accacaaatt aatcactatg tttataaggt agtatcagaa 4620
180 ttttttttagg attcacaact aatcactata gcacatgacc ttgggattac atttttatgg 4680
182 ggcaggggta agcggcctttt aaatcatttg tgtgctctgg ctcttttgat agaagaaagc 4740
184 aacacaaaag ctccaaaggg ccccctaacc ctcttggtgc tccagttatt tggaaactat 4800
186 gatctgcac cttaggaatc tgggatttgc cagttgctgg caatgtagag caggcatgga 4860
188 attttatatg ctagtgaagc ataataatg gttagtgtta attagttttt cttcctttga 4920
190 ttttattggc cataattgct actcttcata cacagtatat caaagagctt gataatttag 4980
192 ttgtcaaaag tgcacggcg acattatctt taattgtatg tatttgggtgc ttcttcaggg 5040
194 attgaactca gtatctttca ttaaaaaaca cagcagtttt ccttgctttt tatatgcaga 5100
196 atatcaaagt catttctaatt ttagttgtca aaaacatata catattttta cattagtttt 5160
198 ttgaaaact cttgggtttt ttttttttga aatgagtggg ccactaagcc acactttccc 5220
200 ttcacctgc ttaatccttc cagcatgtct ctgcactaat aaacagctaa attcacataa 5280
202 tcatcctatt tactgaagca tggatcatgct gggttataga ttttttacct atttctactc 5340
204 tttttctcta ttgggtggcac tgtaaaact ttccagtatt aaattatcct tttctaacac 5400
206 ttaggaact attttgaatg catgtgacta agagcatgat ttatagcaca acctttccaa 5460
208 taatccctta atcagatcac attttgataa accctgggaa catctggctg caggaatttc 5520
210 aatatgtaga aacgctgcct atgggttttt gcccttactg ttgagactgc aatatcctag 5580
212 accctagttt tatactagag ttttattttt agcaatgcct attgcaagtg caattatata 5640
214 ctccagggaa attcaccaca ctgaatcgag catttggtg tgatgtgtg aagtatatct 5700
216 gggacttcag aagtgcattg tatttttctc ctgtgaaacc tgaatctaca agttttctgc 5760
218 caagccactc aggtgcattg caggggaccg tgataatggc tgatgaaaat tgatgattgg 5820
220 tcagtgaagt caaaaggagc cttgggatta ataaacatgc actgagaagc aagaggagga 5880
222 gaaaaagatg tctttttctt ccagggtgaac tgggaatttag ttttgcctca gatttttttc 5940
224 ccacaagata cagaagaaga taaagatttt tttgggtgag agtggtgggc ttgcattaca 6000
226 tcaaacagag ttcaaattcc acacagataa gaggcaggat atataagcgc cagtggtagt 6060
228 tgggaggaat aaaccattat ttggatgcag gtgggttttt attgcaaata tgtgtgtgtc 6120
230 ttcagtgatt gtatgacaga tgatgtattc ttttgatgtt aaaagatttt aagtaagagt 6180
232 agatacattg tacccatttt acattttctt attttaacta cagtaatcta cataaatata 6240
234 cctcagaaat catttttggg gattattttt tgtttttag aattgcactt cagtttattt 6300
236 tcttacaat aaccttacat tttgtttaat ggcttccaag agcctttttt tttttgtatt 6360
238 tcagagaaaa ttcagggtacc aggatgcaat ggatttattt gattcagggg acctgtattt 6420
240 ccatgtcaaa tgttttcaaa taaaatgaaa tatgagtttc aatacttttt atattttaat 6480
242 atttccttaa tattatgggt attgtccgcc attttgttgt atattgtaaa taaagtttag 6540
244 attgt

```

247 <210> SEQ ID NO: 2

248 <211> LENGTH: 1043

249 <212> TYPE: PRT

250 <213> ORGANISM: Homo sapiens

252 <400> SEQUENCE: 2

```

254 Met Ala Ala Ser Phe Pro Pro Thr Leu Gly Leu Ser Ser Ala Pro Asp
255 1 5 10 15
258 Glu Ile Gln His Pro His Ile Lys Phe Ser Glu Trp Lys Phe Lys Leu
259 20 25 30
262 Phe Arg Val Arg Ser Phe Glu Lys Thr Pro Glu Glu Ala Gln Lys Glu
263 35 40 45
266 Lys Lys Asp Ser Phe Glu Gly Lys Pro Ser Leu Glu Gln Ser Pro Ala
267 50 55 60
270 Val Leu Asp Lys Ala Asp Gly Gln Lys Pro Val Pro Thr Gln Pro Leu

```

RAW SEQUENCE LISTING

DATE: 01/19/2006

PATENT APPLICATION: US/10/563,570

TIME: 13:23:32

Input Set : A:\059742-5001-US Sequence Listing.txt

Output Set: N:\CRF4\01192006\J563570.raw

```

271 65              70              75              80
274 Leu Lys Ala His Pro Lys Phe Ser Lys Lys Phe His Asp Asn Glu Lys
275              85              90              95
278 Ala Arg Gly Lys Ala Ile His Gln Ala Asn Leu Arg His Leu Cys Arg
279              100              105              110
282 Ile Cys Gly Asn Ser Phe Arg Ala Asp Glu His Asn Arg Arg Tyr Pro
283              115              120              125
286 Val His Gly Pro Val Asp Gly Lys Thr Leu Gly Leu Leu Arg Lys Lys
287              130              135              140
290 Glu Lys Arg Ala Thr Ser Trp Pro Asp Leu Ile Ala Lys Val Phe Arg
291 145              150              155              160
294 Ile Asp Val Lys Ala Asp Val Asp Ser Ile His Pro Thr Glu Phe Cys
295              165              170              175
298 His Asn Cys Trp Ser Ile Met His Arg Lys Phe Ser Ser Ala Pro Cys
299              180              185              190
302 Glu Val Tyr Phe Pro Arg Asn Val Thr Met Glu Trp His Pro His Thr
303              195              200              205
306 Pro Ser Cys Asp Ile Cys Asn Thr Ala Arg Arg Gly Leu Lys Arg Lys
307              210              215              220
310 Ser Leu Gln Pro Asn Leu Gln Leu Ser Lys Lys Leu Lys Thr Val Leu
311 225              230              235              240
314 Asp Gln Ala Arg Gln Ala Arg Gln Arg Lys Arg Arg Ala Gln Ala Arg
315              245              250              255
318 Ile Ser Ser Lys Asp Val Met Lys Lys Ile Ala Asn Cys Ser Lys Ile
319              260              265              270
322 His Leu Ser Thr Lys Leu Leu Ala Val Asp Phe Pro Glu His Phe Val
323              275              280              285
326 Lys Ser Ile Ser Cys Gln Ile Cys Glu His Ile Leu Ala Asp Pro Val
327              290              295              300
330 Glu Thr Asn Cys Lys His Val Phe Cys Arg Val Cys Ile Leu Arg Cys
331 305              310              315              320
334 Leu Lys Val Met Gly Ser Tyr Cys Pro Ser Cys Arg Tyr Pro Cys Phe
335              325              330              335
338 Pro Thr Asp Leu Glu Ser Pro Val Lys Ser Phe Leu Ser Val Leu Asn
339              340              345              350
342 Ser Leu Met Val Lys Cys Pro Ala Lys Glu Cys Asn Glu Glu Val Ser
343              355              360              365
346 Leu Glu Lys Tyr Asn His His Ile Ser Ser His Lys Glu Ser Lys Glu
347              370              375              380
350 Ile Phe Val His Ile Asn Lys Gly Gly Arg Pro Arg Gln His Leu Leu
351 385              390              395              400
354 Ser Leu Thr Arg Arg Ala Gln Lys His Arg Leu Arg Glu Leu Lys Leu
355              405              410              415
358 Gln Val Lys Ala Phe Ala Asp Lys Glu Glu Gly Gly Asp Val Lys Ser
359              420              425              430
362 Val Cys Met Thr Leu Phe Leu Leu Ala Leu Arg Ala Arg Asn Glu His
363              435              440              445
366 Arg Gln Ala Asp Glu Leu Glu Ala Ile Met Gln Gly Lys Gly Ser Gly
367              450              455              460

```

RAW SEQUENCE LISTING

DATE: 01/19/2006

PATENT APPLICATION: US/10/563,570

TIME: 13:23:32

Input Set : A:\059742-5001-US Sequence Listing.txt

Output Set: N:\CRF4\01192006\J563570.raw

```

370 Leu Gln Pro Ala Val Cys Leu Ala Ile Arg Val Asn Thr Phe Leu Ser
371 465                      470                      475                      480
374 Cys Ser Gln Tyr His Lys Met Tyr Arg Thr Val Lys Ala Ile Thr Gly
375                      485                      490                      495
378 Arg Gln Ile Phe Gln Pro Leu His Ala Leu Arg Asn Ala Glu Lys Val
379                      500                      505                      510
382 Leu Leu Pro Gly Tyr His His Phe Glu Trp Gln Pro Pro Leu Lys Asn
383                      515                      520                      525
386 Val Ser Ser Ser Thr Asp Val Gly Ile Ile Asp Gly Leu Ser Gly Leu
387                      530                      535                      540
390 Ser Ser Ser Val Asp Asp Tyr Pro Val Asp Thr Ile Ala Lys Arg Phe
391 545                      550                      555                      560
394 Arg Tyr Asp Ser Ala Leu Val Ser Ala Leu Met Asp Met Glu Glu Asp
395                      565                      570                      575
398 Ile Leu Glu Gly Met Arg Ser Gln Asp Leu Asp Asp Tyr Leu Asn Gly
399                      580                      585                      590
402 Pro Phe Thr Val Val Val Lys Glu Ser Cys Asp Gly Met Gly Asp Val
403                      595                      600                      605
406 Ser Glu Lys His Gly Ser Gly Pro Val Val Pro Glu Lys Ala Val Arg
407                      610                      615                      620
410 Phe Ser Phe Thr Ile Met Lys Ile Thr Ile Ala His Ser Ser Gln Asn
411 625                      630                      635                      640
414 Val Lys Val Phe Glu Glu Ala Lys Pro Asn Ser Glu Leu Cys Cys Lys
415                      645                      650                      655
418 Pro Leu Cys Leu Met Leu Ala Asp Glu Ser Asp His Glu Thr Leu Thr
419                      660                      665                      670
422 Ala Ile Leu Ser Pro Leu Ile Ala Glu Arg Glu Ala Met Lys Ser Ser
423                      675                      680                      685
426 Glu Leu Met Leu Glu Leu Gly Gly Ile Leu Arg Thr Phe Lys Phe Ile
427                      690                      695                      700
430 Phe Arg Gly Thr Gly Tyr Asp Glu Lys Leu Val Arg Glu Val Glu Gly
431 705                      710                      715                      720
434 Leu Glu Ala Ser Gly Ser Val Tyr Ile Cys Thr Leu Cys Asp Ala Thr
435                      725                      730                      735
438 Arg Leu Glu Ala Ser Gln Asn Leu Val Phe His Ser Ile Thr Arg Ser
439                      740                      745                      750
442 His Ala Glu Asn Leu Glu Arg Tyr Glu Val Trp Arg Ser Asn Pro Tyr
443                      755                      760                      765
446 His Glu Ser Val Glu Glu Leu Arg Asp Arg Val Lys Gly Val Ser Ala
447                      770                      775                      780
450 Lys Pro Phe Ile Glu Thr Val Pro Ser Ile Asp Ala Leu His Cys Asp
451 785                      790                      795                      800
454 Ile Gly Asn Ala Ala Glu Phe Tyr Lys Ile Phe Gln Leu Glu Ile Gly
455                      805                      810                      815
458 Glu Val Tyr Lys Asn Pro Asn Ala Ser Lys Glu Glu Arg Lys Arg Trp
459                      820                      825                      830
462 Gln Ala Thr Leu Asp Lys His Leu Arg Lys Lys Met Asn Leu Lys Pro
463                      835                      840                      845
466 Ile Met Arg Met Asn Gly Asn Phe Ala Arg Lys Leu Met Thr Lys Glu

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/563,570

DATE: 01/19/2006
TIME: 13:23:33

Input Set : A:\059742-5001-US Sequence Listing.txt
Output Set: N:\CRF4\01192006\J563570.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; N Pos. 21,22
Seq#:10; N Pos. 21,22
Seq#:11; N Pos. 21,22
Seq#:12; N Pos. 23,24
Seq#:13; N Pos. 23,24
Seq#:14; N Pos. 21,22
Seq#:15; N Pos. 23,24
Seq#:16; N Pos. 23,24
Seq#:17; N Pos. 24,25
Seq#:18; N Pos. 25,26
Seq#:19; N Pos. 25,26
Seq#:20; N Pos. 23,24
Seq#:21; N Pos. 23,24

VERIFICATION SUMMARY

DATE: 01/19/2006

PATENT APPLICATION: US/10/563,570

TIME: 13:23:33

Input Set : A:\059742-5001-US Sequence Listing.txt

Output Set: N:\CRF4\01192006\J563570.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:942 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:965 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:988 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
L:1011 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:1034 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:1057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0
L:1080 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:1103 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:1126 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:1149 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
L:1172 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:1195 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:1218 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0